

Title (en)  
**TWO-POLE OVERCURRENT PROTECTION**

Publication  
**EP 0118785 B1 19870527 (DE)**

Application  
**EP 84101454 A 19840213**

Priority  
SE 8300853 A 19830216

Abstract (en)  
[origin: US4546401A] A two-pole overcurrent protection device arranged to interrupt the current flowing in a conductor if the current exceeds a predetermined level employs a semiconductor wafer on which is formed a turn-off thyristor and a MOS transistor. The control electrode of the transistor is supplied with a voltage dependent on the on-state voltage drop of the thyristor and, therefore, on its current, and at a certain thyristor current the transistor short-circuits one of the emitter junctions of the thyristor to extinguish the thyristor. For firing the thyristor, one of the base layers thereof is supplied with a gate trigger current via a JFET transistor portion formed in the semiconductor wafer with a horizontal channel region. This transistor portion is designed so that its saturation current exceeds, with a suitable margin, the current necessary for firing the thyristor. When a high voltage exists across the thyristor, the transistor portion will limit the current flowing to the base layer to a value which is equal to the saturation current of the transistor portion.

IPC 1-7  
**H01L 29/74**; **H01L 29/10**

IPC 8 full level  
**H02H 3/08** (2006.01); **H01L 27/02** (2006.01); **H01L 29/74** (2006.01); **H01L 29/745** (2006.01); **H01L 29/87** (2006.01); **H02H 9/02** (2006.01)

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Cited by  
US4779125A; EP0433825A1; FR2584237A1; WO8505224A1

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**EP 0118785 A1 19840919**; **EP 0118785 B1 19870527**; DE 3463988 D1 19870702; JP S59155964 A 19840905; SE 435436 B 19840924; SE 8300853 D0 19830216; SE 8300853 L 19840817; US 4546401 A 19851008

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